MDCLXXXV.

CAMBRIDGE EPHEMERIS
AN
ALMANACK
OF
The Cœlestial Motions, For the Year Of the Christian Æra, 1685.

Being from

The
- *Creation of the World* 5634
- *Flood of Noah* 3978
- *Suffering of* CHRIST 1652
- *Laying found. of Harv. Co.* 43
- *Leap year (in our account)* 2

Whose Vulgar Notes are

Golden Number	14	Epact	4
Cycle of the Sun	14		
Dominical Letter	D	Numb. Direction	29

Calculated for 315 *degr.* Longitude. And Latitude 42 *degr.* 30 *min.* North.

By *W. Williams* Philopatr.

Isaiah 40. 26. *Lift up your eyes on high, and behold who hath Created these things that bringeth out their Hoſt by number, And calleth them all by names.*

CAMBRIDGE,
Printed by *Samuel Green* for the year 1685.

Of the Eclipſes,

THree *Eclipſes* will happen this year, two of the *Moon*, one of the *Sun*.

The Firſt will be of the Moon on the *6* of *June* about two of the clock in the afternoon, but inviſible to us.

The ſecond will be of the Sun on the 21 of *June* about *4* of the clock in the Aftern: This is a ſmall *Eclipſe* and ſcarcely viſible to us, but poſſibly may be viſible to ſuch as will be to the *Northward* of us.

The *Third* and laſt will be an *Eclipſe* of the Moon on *November* 30 It will be a Total, and Central Eclipſe, and in part viſible to us in *New-England*, If clouds hinder not.

Eclipſe begins	*55 min: paſt 3 aftern:*
Tot. darkneſs begins	*12 min. 23 ſec: paſt 5.*
——————*Ends*	*52 min. 49 ſec: paſt 6.*
——————*Laſts*	*1 hour 40 min. 26.*
Eclipſe ends	*43 min. 2 ſec. paſt 7 n:*
——————*Laſts*	*3 hours 48 min 2 ſec:*
Digits Eclipſed	*20. 19.*

About half the Moons body obſcured when ſhe riſes.

Note that Mercury oppoſes, and Saturn quadrates the Moon when Eclipſed.

VEnus having been our Phoſphorus or morning ſtar till the 18 of *June*, She then becomes our Heſperus or Evening ſtar ſo continuing to the end of this year.

March. hath 31 dayes.

First Quarter 3 Day 27 *min*, past 3 morn.
Full Moon, 10 Day 2 *min*. past 1 afternoon.
Second Quarter 17 Day 21 *min*. past 4 morn.
New Moon 24 Day 8 *min*. past 5 night.

M.	W.	Planets Aspects. Courts &c.	R ☉ S	☉ place	☾ place
1	D	☍ ♂ ☾ ♄ 13 ♍ Ret	6 12 6	21 ♓	♊ 04
2	2	□ ♄ ☾	6 11 6	22 55	15
3	3	☌ ♀ ☿ C. Assist. Bos. C. Pl	6 10 6	23 55	27
4	4	☾ ☊ ♃ 20 ♎ Retr.	6 8 6	24 54	♋ 09
5	5	Count. Court Hart. □ ♃	6 7 6	25 54	22
6	6	△ ☉ ☿ ☾	6 6 6	26 54	♌ 01
7	7		6 4 6	27 53	18
8	D	☍ ♀ ☿ ☾	6 2 6	28 53	♍ 02
9	2	☌ ♄ □ ♂	6 1 6	29 52	15
10	3	Court at Fairfield.	6 0 6	30 ♈	29
11	4	☌ ♃ Lun ♂ 8 ♐ Di.	5 59 7	01 5	♎ 14
12	5		5 57 7	02 56	29
13	6	☾ Perig. △ ♀ ☿ Lun.	5 56 7	03 48	♏ 14
14	7	□ ♂ ♀ ☿.	5 55 7	04 48	29
15	D	△ ☉ ☌ ♂ □ ♄	5 53 7	05 47	♐ 12
16	2	☍ ♄ ♀ ☿. ♀ 12 ♓	5 52 7	06 4	27
17	3	Lun ☋ △ ♄	5 50 7	07 45	♑ 11
18	4	☌ ♀ ☿ □ ♃	5 48 7	08 44	25
19	5		5 46 7	09 43	♒ 06
20	6	△ ☉ ♃ Lun	5 44 7	10 42	21
21	7	☿ 19 ♓	5 43 7	11 41	♓ 04
22	D	☍ ♄ ☌ ♀ □ ♂ Lun	5 41 7	12 40	17
23	2	□ ♄ ♂ ☌ Mer. Lun.	5 40 7	13 39	30
24	3	△ ♂ Lun	5 39 7	14 38	♈ 12
25	4	☍ ♃ Lun	5 38 7	15 37	24
26	5	♄ 11 ♍ Retr.	5 37 7	16 36	♉ 06
27	6	☍ ☉ ♃ △ ♄	5 36 7	17 35	18
28	7	☾ Apog.	5 34 7	18 34	30
29	D	☍ ♂ □ ♄ Lun	5 33 7	19 33	♊ 12
30	2	△ ♃ Lun.	5 32 7	20 32	24
31	3	Co Ipsw. N Ham. ☾ ☊	5 31 7	21 31	♋ 06

THis moneth will neither come in, nor go out with extraordinary tides: From the 9 to the 14 they will be high; higher then at the time of the change.

April hath 30 dayes.

First Quarter 1 Day 7 *min.* past 4 night.
Full Moon 8 Day 21 *min.* past 10 at night.
Second Quarter 15 Day 48 *min.* past noon.
New Moon 23 Day 58 *min.* past 8 morn.

M.	W.	Planets, Aspects, Courts &c.	R	☉ S	☉ Place	☾ Place
1	4	□♆☾♆ 17 ♎ Retrog	5	28	7	22 ♈ ♋ 18
2	5	△♂♀☾	5	27	7	23 27 30
3	6	△♀☾	5	26	7	24 26 ♌ 13
4	7	△♂♀ ♂ 13 ☍ Re	5	24	7	25 24 26
5	D	♂♆□♂☾	5	23	7	26 23 ♍ 09
6	2	♂♆♀	5	22	7	27 21 23
7	3	Count. Court Cam-♂♀	5	20	7	28 19 ♎ 08
8	4	♂♆♂♀☾	5	18	7	29 18 23
9	5	♀ 11 ♈ Dir.	5	17	7	00 ♉ ♍ 08
10	6		5	16	7	01 14 23
11	7	△♂♀□♆☾	5	15	7	02 13 ☍ 08
12	D	☾ Perig. ♂☉ △♀☾	5	14	7	03 11 23
13	2	♂ Jup ♀ Trine ♄☾	5	13	7	04 09 ♐ 07
14	3	Cour. Salisbury	5	11	7	05 07 21
15	4	□☉☾ ♀5 ♈	5	10	7	06 06 ♒ 05
16	5	□♂ Tri. ♆	5	9	7	07 04 18
17	6	Trine ♄♀	5	7	7	08 02 ♓ 01
18	7	♂♄☾□♂	5	6	7	09 00 14
19	D	♄ 10 ♍ Retrograde.	5	4	7	09 58 26
20	2	Trine ☉♄	5	3	7	10 56 ♈ 08
21	3	♂ Jup Lun.	5	2	7	11 54 21
22	4	♂♀ Lun-	5	1	7	12 52 ♉ 03
23	5	Trine ♄ Lu		0	7	13 50 15
24	6	♂♀ Lun Jup. 14 ♎ R		3	9	8 14 48 27
25	7	☾ Aogæon		5	7	8 15 45 ♊ 09
26	D	♂♀ Lun.	4	5	6	8 16 43 21
27	2	☾♌	4	5	5	8 17 4 ♋ 03
28	3	Count. Court Bolton	4	5	4	8 18 39 14
29	4	✳☉ Lun. ♂ 12 ☍ R	4	5	3	8 19 37 26
30	5	Martil. ♀ Lun	4	5	2	8 20 34 ♌ 09

SPring tides may be expected (this month) from the time of the Full moon till towards the middle of the month: Though none very extraordinary.

May hath 31 dayes.

First Quarter 1 Day 52 *min*, past 10 morn.
Full Moon, 8 Day 11 *min*. past 6 morn.
Second Quarter 14 Day 13 *min*. past 11 night.
New Moon 23 Day 24 *min*. past 1 morn.
First Quarter 30 Day 20 *min*. past 10 night.

M	W	Planets Aspects. Courts &c.	R ☉ S	☉ place	☾ place
1	6		4 51 8	21 ♉	♌ 21
2	7	△♄ □♂ ☾ Perig	4 50 8	22 30	♍ 04
3	D	△☉♄ △♀Lu.	4 49 8	23 27	18
4	2	□☉♆ Lun △♂ Lu.	4 48 8	24 25	♎ 02
5	3	Venus 13 ♉ Direct	4 47 8	25 23	16
6	4	♂♄ △♀ □☿ Lu.	4 46 8	26 20	♏ 01
7	5	♀ 17 ♊ Direct ✶☉L	4 45 8	27 18	16
8	6	✶♂♀	4 44 8	28 15	♐ 02
9	7	♂♀ Lun	4 43 8	29 13	17
10	D		4 42 8	00 ♊	♑ 02
11	2	♂♆ △♄ Lun	4 41 8	01 08	16
12	3	♄ to ♍ di	4 40 8	02 05	♒ 01
13	4	□♄♂☿ Mer	4 39 8	03 02	15
14	5	Court Elect. Harif. ☿♂	4 39 8	04 00	28
15	6	△♆ Lun	4 38 8	04 57	♓ 11
16	7	□♀ Lun. Apog.	4 37 8	05 55	24
17	D	□♆ Lun	4 36 8	06 52	♈ 05
18	2	Jupiter 13 ♑.	4 35 8	07 49	18
19	3	△♀ Lun	4 34 8	08 47	♉ 01
20	4	☿☉ Mer.	4 33 8	09 44	12
21	5	☿♄ □♂ Lun	4 32 8	10 41	24
22	6	△☿ Lun	4 31 8	11 39	♊ 06
23	7	Mars 6 ♑ Retrograde	4 31 8	12 36	18
24	D	♂♀ △♂ Lun	4 31 8	13 33	30
25	2	☿♆ Lun	4 30 8	14 30	♋ 12
26	3	C Assist. Hartford ☾♈	4 30 8	15 27	23
27	4	Court ELECT. Boston	4 29 8	16 25	♌ 06
28	5	♂♂ △ Mer. Lun.	4 29 8	17 22	18
29	6	♀ 12 ♊ △♄ Lun	4 28 8	18 19	30
30	7	△☿□♀ Lun. Perig	4 28 8	19 16	♍ 12
31	D	□♆ Lun	4 28 8	20 13	27

The tides may probably begin to swell quickly after this month hath begun, and fall when the Moon comes to be in her wain; so likewise towards the latter end of the month they may somewhat swell.

June hath 30 dayes.

Full Moon 6 Day 23 *min.* past noon.
Second Quarter 13 Day 3 *min* past noon.
New Moon 21 Day 12 *min* past 3 afternoon.
First Quarter 29 Day 23 *mun.* past 7 morn.

M.	W.	Planets, Aſpects Courrs &c,	R ☉ S.	☉ Place.	☾ Place
1	4	Artil. Elect. Boſt. ☌♆.	4 28 8	21 ♊	♎ 11
2	5	C Elect. Plim C. N-Lo.	4 28 8	22 08	25
3	6	△☿ ✶♄☽	4 27 8	23 05	♏ 10
4	7	☿ ♋ Retro.	4 27 8	24 02	24
5	1	☾ Derig. ☌♂ □♄☾	4 27 8	24 59	♐ 09
6	2	☍☿ Lun ♈ Eclips.	4 27 8	25 56	24
7	D	☍☿ △♄ □♆ Lun	4 26 8	26 53	♑ 09
8	2	♄ ♊ ♍ Dir	4 25 8	27 50	24
9	3	C. Court Charles ☌☉☿	4 26 8	28 47	♒ 08
10	4	Court N haven. ☌☿☿	4 26 8	29 44	22
11	5	△☿ △☿ □☽ Lu	4 26 8	00 ♋	♓ 05
12	6	♆ ☽ ♎ Dir. ☍♄	4 26 8	01 37	19
13	7	D △♂ □☿ Lun	4 26 8	02 36	♈ 02
14	1	☍♆ Lun.	4 26 8	03 33	14
15	2		4 26 8	04 30	26
16	3	♂ 29 ♏ Retrog:	4 26 8	05 27	♉ 08
17	4	△♄ Lun.	4 27 8	06 24	20
18	5	☌☉☿ ☍♂ Lun	4 2 8	07 21	♊ 02
19	6	△♆ □♄ Lun A o	4 27 8	08 18	14
20	7	D ☌☿ Lun ♋	4 27 8	09 15	26
21	1	☌☿ Lun ☿ ♊	4 28 8	10 12	♋ 08
22	2	✶♄ Mer.	4 28 8	11 09	20
23	3	✶☉ Saturn △♂	4 28 8	12 06	♌ 02
24	4	☿ ♊ Dir. □♆☿	4 29 8	13 03	15
25	5	□☉♆ □♂ Lun	4 29 8	14 00	27
26	6	☌♂ Sat. Lun	4 29 8	14 57	♍ 10
27	7	□ Mer Lun	4 30 8	15 54	23
28	D	Saturn ☍♍ Direct	4 30 8	16 52	♎ 07
29	2	☌♆ □☿ Lun	4 31 8	17 49	20
30	3	Court Salem. △ Mer.	4 32 8	18 45	♏ 04

THis month will bring in ſwelling tides with it; after the full they will fall; On the day of the Moons being at the full, they will be higheſt (we think) and very high then: Not extraordinary at the time of her change.

July hath 31 dayes.

Full Moon 5 Day 27 *min* past 8 morn.
Second Quarter 13 Day 4 *min* past 3 morn.
New Moon 21 Day 45 *min* past 4 morn.
First Quarter 28 Day 13 *min.* past noon.

M.	W.	Planets. Aspects Courts &c	R ☉ S	☉ Place	☾ Place
1	4	COMMENCEMENT	4 32 8	♋	♏ 18
2	5	☌ ♂ ♃ 14 ♎	4 32 8	20 4[illegible]	♐ 03
3	6	□ ♄ ☾ Perig.	4 33 8	21 37	17
4	7	☍ ☿ Lun ♈	4 34 8	22 34	♑ 02
5	D	△ ♄ □ ♃ Lun	4 35 8	23 31	17
6	2	☍ ♀ Lun	4 35 8	24 28	♒ 02
7	3	Court Plim △ ♃ ♂ L.	4 36 8	25 26	17
8	[illegible]	♂ enters ♐ □ ♂ L.	4 37 8	26 2[illegible]	♓ 01
9	5	☍ ♄ Lun	4 38 8	27 20	14
10	6	△ ♂ Lu.	4 39 8	28 17	27
11	[illegible]		4 40 8	29 14	♈ 10
12	D	☍ ♃ Lun	4 41 8	00 ♌	23
13	2	♀ 8 ♌ ✱ ♄ ☿	4 42 8	01 09	♉ 05
14	3	△ ♄ □ ♃ ☿	4 43 8	02 06	17
15	4	☍ ♂ △ ☉ ♂	4 44 8	03 03	29
16	5	☾ Apog.	4 45 8	04 01	♊ 10
17	6	▲ ♃ ☾ ☊	4 46 8	04 58	22
18	7	☿ 23 ♋ Dir.	4 47 8	05 55	♋ 04
19	D		4 48 8	06 53	16
20	2	☌ ☿ Lun ✱ ♃ ♀	4 49 8	07 50	29
21	3	△ ♂ Lun	4 50 8	08 47	♌ 11
22	4	☌ ♀ Lun	4 51 8	09 45	24
23	5	△ ♂ ☿ ♄ 15 ♍ Di.	4 52 8	10 42	♍ 07
24	6	☌ ♄ Lun	4 53 8	11 40	20
25	7		4 54 8	12 37	♎ 04
26	D	☌ ♃ Lun	4 55 8	13 34	17
27	2	♃ 17 ♎	4 56 8	14 32	♏ 01
28	3	Count Court Boston.	4 57 8	15 29	14
29	4	☌ ☉ ☿ ☾ Perig.	4 58 8	16 27	29
30	5	☌ ♂ ✱ ♃ ☿ ☾ ♈	4 59 8	17 24	♐ 13
31	6	♎ Mer. △ ♀ ✱ ☉ ♃	5 0[illegible] 7	18 22	[illegible]

THe highest tides in this moneth will be quickly after the beginning thereof; perhaps on the 4 day. After the change is past possibly the tides may keep up, but the haymakers need not much fear them, for they will not probably be extraordinary high.

August hath 31 dayes.

Full Moon 4 Day 4 *min* past 5 morn.
Second Quarter 12 Day 8 at night.
New Moon 19 Day 33 *min* past 5 night.
First Quarter 26 Day 42 *min.* past 5 night.

M	W	Planets Aspects Courts &c.	R ☉s	☉ Place	☾ Place
1	7	△ ♄ ☿ ☾	5 2 7	19 ♌	♑ 12
2	D	♂ 8 ⊹ Dir	5 3 7	20 17	26
2	2		5 5 7	21 15	♒ 08
4	3	△ ♃ ☍ ☿ Lun.	5 6 7	22 12	25
5	4	☍ ♀ Lun.	5 7 7	23 10	♓ 07
6	5	☍ ♄ Lun. ☿ 7 ♍ Dir.	5 8 7	24 08	22
7	6		5 9 7	25 06	♈ 05
8	7	☍ ♃ Lun. △ ♂ Lun	5 11 7	26 03	1[illegible]
9	D	□ ♂ ♀	5 12 7	27 01	♉ 0
10	2	△ ♀ Lun. ♀ 9 ♍ D.	5 14 7	27 59	13
11		△ ♄ Lun. Apog.	5 15 7	28 57	2[illegible]
12		□ ♂ ☿	5 17 7	29 55	♊ 07
13	5	△ ♃ Lun. ☍ ♂ Lun. ☊	5 18 7	30 ♍	[illegible]
14	6	♂ ♄ ♀ ☿	5 19 7	31 [illegible]	♋ [illegible]
15	7	♄ 18 ♍	5 20 7	32 48	24
16	D	□ ♃ Lun.	5 22 7	33 46	14
17		♂ ♀ ☿	5 24 7	34 44	♌ 07
18	3	△ ♂ Lun.	5 25 7	35 43	2
19	4	♃ 11 ♎ Dire.	5 27 7	36 41	♍ 03
20	5	♂ ♄ Lun.	5 28 7	37 39	16
21	6	♂ ♀ ♀ Lun.	5 29 7	38 37	♎ 00
22	7		5 30 7	39 35	13
23	D	♂ ♃ Lun.	5 31 7	40 33	27
24	2	□ ♄ ♂	5 32 7	41 31	♏ 11
25	3	♂ 20 ⊹ Direct.	5 34 7	42 30	25
26	4	Lun. Perig.	5 35 7	43 28	⊹ 10
27	5	♂ ♂ Lun. ☋	5 37 7	44 26	24
28	6	□ ♀ Lun.	5 39 7	45 24	♑ 08
29	7	△ ♄ Lun	5 41 7	46 23	22
30	D	△ ♀ Lu. Ven. 7 ♎ D	5 42 7	47 22	♒ 06
31	2	△ ♃ ♀ Lun.	5 43 7	48 20	20

THe tides will rise when the month begins, and when the full is come you may see them at their highest: When the change comes the tides will be indifferently high and continue so for several days.

September hath 30 dayes.

Full Moon 2 Day 2 *min.* past 4 night.
Second Quarter 10 Day 18 *min* past 5 night.
New Moon 18 Day 16 *min* past 5 morn.
First Quarter 24 Day 20 *mn.* past 10 at night.

	M.	W.	Planets Aſpects Courrs &c.	R	☉S.	☉ Place.	☽ Place.
1	3		Court Aſſeſt. Boſton.		5 44 7	19 ♍	♓ 3
2	4		♂ ♄ ☽ ☌ ☉ ♄		5 45 7	20	17
3	5		Court Aſſeſt. Hartford.		5 47 7	21 16	♈ 00
4	6		☿ 17 ♎ direct		5 49 7	22 14	13
5	7		♂ ☿ ☿ ♆ ☽		5 51 7	23 13	26
6	D				5 53 7	24 12	♉ 09
7	2		△ ♄ ☽		5 55 7	25 10	21
8	3		♄ 21 ♍ dir.		5 56 7	26 09	♊ 03
9	4		☾ Apogæum.		5 58 7	27 08	15
10	5		△ ♆ ☿ ☿ ☽ ♑ ♂ ☌		5 59 7	28 07	28
11	6		♆ 16 ♎ direct.		5 59 7	29 06	♋ 08
12	7		☌ ♆ ☿		6 00 6	00 ♎	20
13	D		□ ♆ ☿ Lun.		6 02 6	01 03	♌ 02
14	2		Artil Ele. Cam. □ ☉ ♂		6 03 6	02 02	15
15	3		♂ ♆ ☿		6 05 6	03 01	28
16	4		△ ☽ ♂ ☽ ♉ d		6 07 6	04 00	♍ 11
17	5		☌ ♄ Lun.		6 09 6	04 59	25
18	6		☌ Venus ☿ □ ♂		5 10 6	05 58	♎ 09
19	7		☌ ♆ Lun.		6 12 6	06 58	23
20	D		☌ ☿ ☿ Lun		6 13 6	07 57	♏ 07
21	2		☿ 4 ♏ direct		6 15 5	08 56	22
22	3		Court New London		6 16 6	09 55	♐ 06
23	4		□ ♄ ☽ ♆		6 17 6	10 55	19
24	5		☌ ☌ ☾ Perig.		6 18 6	11 54	♑ 03
25	6		✳ ☌ ☿		6 19 6	12 54	18
26	7		□ ♆ ☿ Lun.		6 20 6	13 53	♒ 02
27	D		☿ ♏ Retrograde		6 21 6	14 53	20
28	2		△ ♆ ☽ Lun		6 23 6	15 52	♏ 00
29	3		[illegible] Joſv. Springf.		6 25 6	16 52	13
30	4		♆ ☿ ☌ ♂ ♄ Lun		6 26 6	17 51	26

NO tide extraordinarily high will happen this month as we reckon; however from the change till about the 24 day they will continue some what high.

October hath 31 dayes

Full Moon 2 Day 59 *min.* past 5 morn.
Second Quarter 10 Day 54 *min.* past 7 morn.
New Moon 17 Day 8 *min.* past 4 night.
First Quarter 24 Day 13 *min.* past 6 morn.
Full Moon 31 Day 49 *min.* past 10 before midnight.

M.W.		Planets, Aspects, Courts &c.	R⊙S	☉ Place	☾ Place
1	5	♄ 23 ♍ Dire. □♂☾	6 27 6	18 ♎	♈ 09
2	6		6 29 6	19 50	22
3	7	☌♅☌☾	6 30 6	20 5	♉ 04
4	D	☌♀ △♂☾	6 31 6	21 49	17
5	2	△♄☾ ♅ 1 ♍ Dir	6 32 6	22 49	29
6	3	C. Court Cambr. ♂⊙☿	6 34 6	23 49	♊ 11
7	4	□♄ △☿☾♃	6 35 6	24 49	23
8	5	△♅☾ ✶♄☿	6 37 6	25 49	♋ 03
9	6	☌♂☾ Apog	6 39 6	26 48	16
10	7	□♂☿ △☿☾	6 40 6	27 48	28
11	D	♂ 20 ♈ Direct	6 41 6	28 48	♌ 10
12	2		6 42 6	29 48	23
13	3	Court Assist. Hartford	6 43 6	00 ♏	♍ 06
14	4	Trine ♂ Lun	6 44 6	01 48	19
15	5	♂♄ Lun	6 45 6	02 48	♎ 02
16	6	♂☉♅♂☿☾	6 47 6	03 48	17
17	7	♂ Jup. ☿ 6 +→ Dir.	6 48 6	04 48	♏ 01
18	D		6 49 6	05 49	16
19	2	△♂♄	6 50 6	06 49	+→ 01
20	3	☌☿☾♆	6 51 6	07 49	16
21	4	□♄ Mer. 20 ♎ D.	6 53 6	08 50	30
22	5	☾ Perigæon.	6 54 6	09 50	♐ 16
23	6	☌♂ □ Mer. Lun	5 56 6	10 50	29
24	7	□ Jup. Lun	6 57 6	11 51	♒ 13
25	D	Trine Mer Lun	6 59 6	12 51	27
26	2	♄ 26 ♍ Direct	7 00 5	13 52	♓ 10
27	3	C. Court Bost. Co. Plim.	7 01 5	14 52	25
28	4		7 02 5	15 52	♈ 06
29	5	Trine ☿ Lun	7 03 5	16 53	18
30	6	□♂ Lun	7 05 5	17 53	♉ 01
31	7	☌ Jup. Mer. Lu	7 07 5	18 54	13

THe tides will happen to be of much the same height this month at the time of the Full and Change as they were the last month: though probably the last day of this month will be higher then the last of the last month.

November hath 30 dayes.

Second Quarter 9 Day 5 *min* past 3 morn.
New Moon 16 Day 39 *min* past 3 morn.
First Quarter 22 Day 15 *min* past 6 night.
Full Moon 30 Day 47 *min* past 5 night.

M.	W.	Planets Aspects Courts &c.	R	☉S.	☉ Place	☾ Place
1	D	♐7 ♏ Direct Trine ♄	7	8 5	19 ♏	♉ 26
2	2	□ ♂ ☿ Trine ♂ ☾	7	9 5	20 55	♊ 08
3	3	Court Fairfield ♄ ☿	7	10 5	21 56	20
4	4	♂ ♐ Mer. ☍ ☿ ☾	7	11 5	22 57	♋ 02
5	5	Quart ♂ Jup.	7	12 5	23 57	14
6	6	☾ Apog ☌ ♂ 8 ♒ Dir.	7	13 5	24 58	26
7	7	☍ ♂ Lun	7	14 5	25 59	♌ 08
8	D		7	15 5	26 59	20
9	2	✶ ☉ ♄	7	16 5	28 0	♍ 02
10	3	☿ 5 ♍ Direct	7	17 5	29 01	15
11	4	Court N-haven ☌ ♄	7	18 5	00 ♎	28
12	5	Trine ☍ Lun	7	19 5	01 03	♎ 11
13	6	✶ ♐ ☿	7	20 5	02 04	26
14	7	☌ Jup. Lun	7	20 5	03 05	♏ 10
15	D	☿ 2 ♏ Dir. ☌ Mer. ☾	7	21 5	04 06	25
16	2	✶ ♄ Mer.	7	22 5	05 07	♎ 10
17	3	☾ ♍	7	23 5	06 08	25
18	4	☌ ☿ Lun	7	23 5	07 09	♍ 10
19	5	Trine ♄ Lun	7	24 5	08 10	25
20	6	☾ Perig.	7	25 5	09 11	♒ 10
21	7	♄ 28 ♍ Direct ☌ ☍	7	25 5	10 12	24
22	D	Trine Jup. Lun	7	26 5	11 13	♓ 08
23	2		7	27 5	12 14	21
24	3	Court Salem ☍ Saturn	7	27 5	13 15	♈ 03
25	4	Trine Mer. Lun	7	28 5	14 16	16
26	5	Jup. 12 ♏ Direct	7	29 5	15 17	29
27	6	☍ Jup. Lun	7	29 5	16 18	♉ 11
28	7	☌ ☉ Mer.	7	30 5	17 20	23
29	D	Trine Sat ☿	7	30 5	18 21	♊ 04
30	2	☍ Mer. Lun Eclip. vii.	7	31 5	19 22	16

THis month comes in with a pretty high tide, thó at the time of the Moons change possibly they may be higher, and so continue for 4 or 5 days.

December hath 31 dayes.

Second Quarter 9 Day 5 *min.* past 3 morn.
New Moon 15 Day 5 *min.* past noon.
First Quarter 22 Day 43 *min.* past 9 morn.
Full Moon 30 Day 19 *min.* past noon.

M.	W.	Planets Aspects Courts &c	R ☉ S.	☉ Place.	☾ Place
1	3	☍ ☉ △ ♂ ☍ ☾ ☊	7 31 5	20 ♐	♊ 29
2	4	♂ 28 ♒ direct △ ♃.	7 32 5	21 26	♋ 11
3	5	Lun Apog.	7 32 5	22 27	23
4	6	☍ ♀ Lun	7 33 5	23 28	♌ 05
5	7	□ ♆ Lun	7 33 5	24 30	17
6	D	△ ☉ ☍ ♂ □ ♄ Mer	7 33 5	25 31	29
7	2	♀ 8 ♒ ✱ ♂ Merc	7 34 5	26 32	♍ 11
8	3		7 34 5	27 33	24
9	4	♂ ♄ □ ☉ Mer. Lun.	7 34 5	28 35	♎ 07
10	5	□ ☉ ♄ Shortest Day.	7 34 5	29 36	20
11	6	☿ 7 ♑ △ ♂ Lun	7 34 5	00 ♏	♏ 04
12	7	♂ ♃ □ ♀ Lun	7 34 5	01 39	19
13	D	□ ♃ ♀ □ ♂ Lun	7 34 5	02 40	♐ 03
14	2	☾ ♈	7 34 5	03 4	18
15	3	♂ ☉ □ ♄ ☾ Perig	7 34 5	04 42	♑ 04
16	4	✱ ♃ ☿ ♂ Mer	7 34 5	05 43	19
17	5	♄ 29 ♍ △ ♄ Lun	7 33 5	06 45	♒ 04
18	6	♂ ♀ □ ♃ Lun	7 33 5	07 46	19
19	7		7 33 5	08 47	♓ 03
20	D	♂ ♂ △ ♃ ✱ ☉ Ln	7 32 5	09 48	17
21	2	☍ ♄ Lun.	7 32 5	10 50	30
22	3	Count Court Charlest	7 31 5	11 51	♈ 13
23	4	♆ 17 ♏ □ Mer Lun.	7 31 5	12 52	26
24	5		7 30 5	13 54	♉ 08
25	6	△ ♂ ♄ ☍ ♆ △ ☉	7 29 5	14 55	20
26	7	△ ♄ Mer ✱ ♂ Lun.	7 29 5	15 56	♊ 02
27	D	□ ♂ ☾ ☊	7 28 5	16 58	14
28	2	♂ 17 ♓ dir ct ✱ ♃ L	7 28 5	18 00	26
29	3	△ ♆ ♂ ♀ Lun.	7 27 5	19 00	♋ 08
30	4	Trine ♃ ♂ ☍ ☉ ☾ Ap	7 27 5	20 01	10
31	5	☍ Mer Lun.	7 26 5	21 02	♓ 02

ON the 30 day the tides will not be high considering the Moon is then at the full, but at the time of the change extraordinarily high tides may be expected.

January hath 31 dayes

Second Quarter 7 Day 35 *min* past 8 morn.
New Moon 13 Day 22 *min* past 7 night.
First Quarter 21 Day 13 *min* past 4 morn.
Full moon 29 Day 35 *min* past 5 morn.

M.	W	Planets Aſpects Courſ & c	R	☉S.	☉ Place	☾ Place
1	6	☌ Mer. ☌ Ven 7 ☓D	7	25	5	♑ 22	♌ 14
2	7	□ Jup Lun.	7	25	5	♑ 23	26
3	D	☌ ♀ Lun.	7	24	5	♑ 24	♍ 08
4	2	Mer. 13 ♒ Di. ☌ ♂	7	24	5	♑ 25	21
5	3	☌ ♄ Lun. Trine ☉ L	7	23	5	♑ 26	♎ 03
6	4		7	22	5	♑ 27	17
7	5		7	21	5	♑ 28	30
8	6	Trine ♀ Lun.	7	20	5	♑ 29	♍ 14
9	7	☌ Jup. Lun. Tri. ☉♄	7	19	5	♒ 00	28
10	D	♄ 29 ♍ Direct.	7	18	5	♒ 01	♐ 12
11	2	□ ♄ ☌ ♀ ☾ ♆	7	17	5	♒ 02	27
12	3	☾ Perig	7	16	5	♒ 03	♑ 12
13	4	Trine Jup ♀	7	15	5	♒ 04	27
14	5	Mer ☌ ♄ ☌ ♂ Lun	7	14	5	♒ 05	♒ 12
15	6		7	13	5	♒ 06	27
16	7	Jup. 20 ♍ Direct.	7	12	5	♒ 07	♓ 11
17	D	☌ ♄ ☌ ♀ Lun	7	11	5	♒ 08	25
18	2	☌ Mars ✶ ☉.	7	10	5	♒ 09	♈ 09
19	3		7	9	5	♒ 10	22
20	4	☌ ☉ Mer. Mars 4 ♈D	7	8	5	♒ 11	♉ 05
21	5	Quartil Lun. Mer	7	7	5	♒ 12	17
22	6	☌ ♄ ♀ ☌ Jup. Tr. ♄	7	6	5	♒ 13	29
23	7	✶ Mars Mer. Tri. Mer	7	5	5	♒ 14	♊ 11
24	D	☾ ♆ ♀ 1 ♈ Direct	7	4	5	♒ 15	23
25	2	Quartile ♄ Venus	7	3	5	♒ 16	♋ 04
26	3	Count. Court Boſton	7	2	5	♒ 17	16
27	4	Trine Jup. ☾ Apog.	7	1	5	♒ 18	28
28	5	Trine Mars ☌ Mer.	6	59	6	♒ 19	♌ 09
29	6		6	57	6	♒ 20	23
30	7	Mer. 2 ♒ Retr.	6	56	6	♒ 21	♍ 05
31	D	Quartile ☉ Jup.	6	54	6	♒ 22	18

High tides may be looked for when the Moon charges the day eſpeically, but they will not continue ſo high very long.

February hath 28 dayes.

Second Quarter 5 Day 20 *min.* past 3 night.
New Moon 12 Day 49 *min.* past 8 morn.
First Quarter 19 Day at 11 at night.
Full Moon 27 Day 43 *min.* past 11 night.

M.	W.	Planets. Aſpects. Courts &c.	R☊S.	☉ Place.	☾ Place
1	2	♂ ♄ Lun. △ ♀	6526	23 ♒	♎ 01
2	3	♀ ♂ ♀ Lun.	6506	24 34	14
		♄ 28 ♍ Dir. △ ☉ L.	6486	25 35	27
3	4	□ ♀ Lun.	6486	26 36	♏ 11
4	5	♂ ♆ Lun	6476	27 36	24
5	7	Lun ♈	6466	28 37	♐ 08
6	D	△ ♂ ♀ Lun.	6446	29 37	21
7	2	♆ 22 ♏ Direct □ ♄	6426	00 ♓	♑ 07
8	3	Lun Perig. □ ♂ ♀ Lu-	6406	01 38	21
9	4	△ ♄ ☉ ♂ er.	6396	02 39	♒ 06
10	5	□ ♆ Lun.	6286	03 39	20
11	6		6376	04 39	♓ 05
12	7		6366	05 40	19
13	D	♂ 21 ♈ △ ♆ Lun	6356	06 40	♈ 03
14	2	♂ ♄ Lun	6346	07 40	17
15	3		6336	08 40	20
16	4	♂ ♂ ♀ Lun	6316	09 41	♉ 12
17	5	□ Mer. Lu.	6296	10 41	25
18	6	△ ♄ ♂ ♆	6286	11 41	♊ 07
19	7	Venus 24 ♈ Lun ♌	6276	12 41	19
20	D	△ Mer.	6266	13 41	♋ 01
21	2	□ Saturn Lu	6246	14 41	12
22	3	△ ☉ ♆ Lun □ Ven	6226	15 41	23
23	4	Lun Anog.	6206	16 41	♌ 06
24	5	☿ 21 ♒ Direct □ ♂	6186	17 40	19
25	6	□ ♆ Mer	6166	18 40	♍ 01
26	7	♂ Mer. △ ♂ Ven. Lu	6146	19 40	14
27	D		6136	20 40	27
28	2	♂ Saturn Lun.			

From the 8 to the 13 day of this Month, tides pretty high will happen: They will not be extraordinary when the Full comes.

Concerning a *RAINBOW.*

THe Rainbow is described, the Image of a many coloured bow appearing in a dark, uneven, hollow, and dewie cloud, caused by the reflection of the Suns beams opposite to it

The Reason why the Image of the Sun does not appear as it does in a Parelius is, because the cloud is uneven, and by reason of its scituation, but it appears round because the cloud is concave, and likewise because the Rays of the Sun falling on the middle of the cloud, they gather themselves to equal Angles:

Observ: If at any time there appear more Rainbows then one, it is to be noted, that only the first is caused by the Sun beams, the other is caused by the resplendency of the first.

There is a twofold final cause of Rainbows, Natural and Supernatural.

The Natural is twofold; 1. It is a sign of Rain *viz.* when it appears in a very watry cloud, that it is ready to fall into drops, or when the colours of the bow grow little and little till at the last they are buryed in a black cloud; this is rarer then the contrary but when it happens is almost an infallible token of Rain ensuing. 2. It is a token of fair weather, when the colours of the bow gradually grow clearer and clearer till at length they vanish away.

The Supernatural end of the Rainbow is to be a sign or symbole of Gods mercy to the world in never destroying it again by a deluge *Genesis* 9.

Whether or no there was any existence of Rainbows before the Floud is a Question? answered by some Affirmatively by some Negatively;

But the Affirmative voice seems to be most clear and rational; For since these bows are grounded on nature as much as a Parelius, Paraselene or any such like object: we must either assert that nature was Supernaturally hindred in its operations (in that respect) till after the floud which is unreasonable, Or else must maintain that a suitable cloud never opposed the sun and gave occasion for a Rainbow till after the Floud, which cannot but be accounted very strange, no lesse then 26 hundred years intervening between those two *Æraes*: —— As for that of *Genesis*. 9. It may imply that God never set his bow in the clouds for a token of a covenant ere that time. And if it should be asked why the Allmighty chose the Rainbow and not anyother Celestial appearance, (if a reason might be attempted) we should say (as *Dr. Brown* in his *Pseud. Epid. p.* 346.) because most proper for the signification intended thereby: Thunder and Lightning had too much terror, to have been tokens of mercy; Comets appeared too seldom to put us in mind of a Covenant to be remembred oft: and might rather signifye that the world should be once destroyed by fire then never again by water: Thus the learned *Doctor* which (together with what precedes and follows) whether satisfactory or no we know not yet trust it cannot be offensive unto any.

According to *Syr.* Look upon the Rainbow, and praise him that made it.

Concerning the nature of COMETS. &c.

COmets are judged by many excellent Philosophers to be *Meteors*, whose matter is an Exhalation, hot and dry, fat and clammy; drawn by vertue of the heavenly bodies into the highest part of the Air, (and sometimes into the Starry region) where it is closely conglutinated into a great Lump, by reason of supply that it hath from below, so long as there is a working to exhale: and being thus compacted, it is set on fire in convenient time by the excessive heat of the place where it resteth: Sometimes they coninue burning long, sometimes but a little time, seven dayes is reckoned to be the least, whereas some have continued 6 months and more, all which commeth to pass by reason of the paucity or plenty of the matter whereof it consisteth.

There are 2 things observable in Comets. The colour and the form or Fashion, both which proceed from the diverse disposing of the matter.

Their colours are principally 3. White, which comes to pass when the matter is thin 2. Ruddy, looking like fire when the matter is meanly thick. 3 Of a blew colour when the matter is very thick.

Their forms or Fashions are principally. 2. 1 Roundish, having beams round about them, which happens when the matter is thin on the edges and thick every where else 2 They appear with a beard or tail, which happens when the matter is but meanly thick towards some one side or other and rather long then round.

Thus are Comets made to be meteors, and certain it is that there are difficulties which will arise from the other notion which some have of them, which may be as difficult yea far more difficult to a rational head then any that will proceed from this notion we have here presented you with.

The cheifest objections against this opinion seem to me to be two. The one is the greatness and duration or long continuance of Comets sometimes. The other objection is grounded upon the place of the Comets existence sometimes, it being found to be above the Moon.

As for the first objection (which might have been made two) Certain it is that a spoonfull of water will yield a vapor an 100 times as big as to its dilation, and since so why may not the like be rationally asserted of fumes or earthy exhalations that thó in themselves they may be very large yet originally very small: and if this is considered we need not wonder that the earth yields so much of exhalations as to cause such vast beings as Comets are and yet to the eye loose nothing of its bigness.

As for the other objection; all the answer, I shall give to it, may be seen in tendring to consideration these two things.

1 That after Comets are above the highest region of the air, or the Moon yet they are under the starry heaven which hath an attractive power 2 That the nature of place above the Moon is falsly concieved of, if imagined to be really different from place below the Moon, Now if thus why may not Comets ascend above the Moon as well as up to the Moon. FINIS.